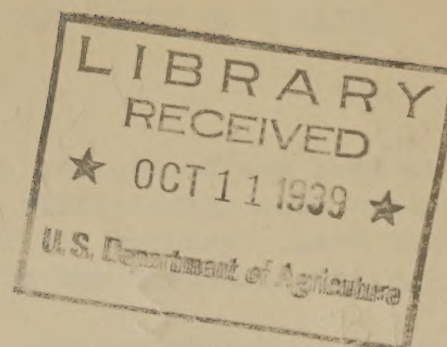


1.95
St 22

U.S. Farm security admin.



STANDARDS FOR SEED GRAIN

The practical minimum standards for seed grain shown in the accompanying table were set up in order that local farm supplies might meet the requirements. Cleaning machinery available on the average farm is not adequate for making as complete seed operations as are the cleaners available to seedsmen and grain handlers. With proper selection of good clean supplies, together with adequate cleaning machinery, it should be possible to secure seed grain of higher purity than is indicated in the standards. One of the best sources of good seed is the certified seed lists issued by the State Crop Improvement Associations, in most cases, located at a state agricultural experiment station and, in some states, at the State Department of Agriculture. Another source of good seed is that which is grown from certified seed. This should be available at only a slight premium above market price.

Minimum germination standards are set at 90 per cent, although it is recognized that good sound plump grain ordinarily germinates 95 per cent or better. In some seasons, weather damage may cause insipient sprouting or slight molding, and otherwise good seed grain fails to germinate more than 90 per cent. Grain having a germination lower than 90 per cent should not be considered as acceptable for seed, except in the case of sorghums when seed supplies are scarce.

Grain which fails to meet the standards on the accompanying table ordinarily would not command any premium for seed purposes, and should be considered as having a value equal to commercial grain of the same grade.

PRECAUTIONS FOR CONSIDERATION WITH REGARD TO VARIETIES OR STRAINS OF ALFALFA AND CLOVER

Alfalfa. In the northern half of the United States the use of any seed stained 10% red should be avoided mainly because it is not sufficiently cold resistant and is of questionable value in some other parts of the country. Seed that carries green stain is also of questionable value in the northern states.

Bacterial wilt, a disease that is widespread in the United States, is particularly serious in many of the best alfalfa growing districts and often destroys stands in two or three years where alfalfa formerly lived ten or more years. Grimm, Hardigan, Baltic, and Ontario variegated alfalfas, varieties generally recommended for severe winter conditions, are very susceptible to the disease and, except in short rotations, are not satisfactory where moisture conditions favor the development of the disease, either under irrigation or where the precipitation is abundant. Under dry-farming conditions where the rainfall is less than 25 inches, bacterial wilt thus far has not appeared to do much damage. Where the disease is prevalent, Cossack and Ladak alfalfas have usually maintained satisfactory stands a year or two longer than Grimm. Common alfalfas are at least no more susceptible than Grimm, and since the seed is considerably cheaper, adapted strains can often be used to advantage in short rotations.

Hardistan and Orestan alfalfas, two strains of Turkistan origin, are quite satisfactory as regards resistance to bacterial wilt and can be used to advantage in many places in the western part of the United States where the climate is relatively dry, but because of their susceptibility to leaf and stem diseases, are not recommended for the humid eastern states. Little or no seed of these alfalfas is available at this time but it is hoped that the effort being made to increase seed of Orestan alfalfa, particularly in Oregon, and of Hardistan, mainly in Nebraska, will result in a fair supply of seed for next year's seeding. Information regarding future supplies of seeds of these varieties can be obtained by writing the experiment station directors of these states.

Red Clover. In the purchase of red clover seed it is suggested that red stained or green stained seed be avoided as seed stained in such a way represents European seed which is not adapted in the United States. Seed stained purple is from Canada and has given particularly good results in the northern states bordering on Canada. Red clover seed that has been grown in one locality from one to ten years offers the best source of adapted seed. Next year it is expected that there will be approximately 150,000 pounds of certified Central Corn Belt blend which is composed of strains from Illinois, Iowa, Ohio, and Indiana, that have been carefully selected from a large number of old lots. In 1941 the Southern Disease Resistant blend, which has given excellent results from Columbus, Ohio, south, will be available in sufficient quantities for agricultural use. The use of adapted seed such as these blends will enable individual farmers to produce seed to supply their own demands if desired.

Sweet Clover. Sweet clover seed generally available on the market is that of an early maturing type which is not as productive for hay or pasture as the late, tall growing variety. Seed of these late maturing strains that have been particularly selected will not be on the market in 1939 but small quantities should be available by the fall of 1940. After seed of a desired strain has been obtained the farmer may produce his own supply. Certified seed of Madrid yellow and white which are superior to common biennial yellow and commercial white, respectively, is available in small quantities and is rapidly being increased.

SEED STANDARDS FOR COTTON AND TOBACCO

Crop	Variety and Varietal Purity	Seed Purity	Germination Per Cent	Disease
Cotton	<u>1/</u>	No weed seeds	80 <u>2/</u>	Use wilt-resistant varieties on wilt- infested soils. Treat seed with ceresan or other fungicides to reduce losses from seedling dis- eases
Tobacco	<u>3/</u>	Well cleaned	80 <u>4/</u>	

1/ Joining a one-variety cotton community is recommended. Sources of good seed are made available to members. Otherwise consult the local farm adviser or county agent, or write to the state extension agronomist or cotton specialist for reliable sources of seed of a suitable variety.

2/ Seed which is otherwise desirable, having a germination as low as 60 per cent, may be used if planting is heavier and the seed is treated with ceresan or some equally effective dust fungicide. The price of such seed should be less than that having a good germination.

3/ Use standard local varieties of known yield and quality. Certified seed is desirable where available. Otherwise use recommended home-grown or commercial supplies of authentic standard varieties.

4/ Germination at planting time. Good seed sometimes germinates poorly when fresh.

PRACTICAL MINIMUM STANDARDS FOR SEED GRAIN

GRAIN	VARIETAL RECOMMENDATIONS	VARIETAL PURITY	GERMINATION 1/ PERCENT	SEED PURITY 2/ PERCENT	TOTAL WEED SEEDS (INCLUDING WILD OATS) PER CENT	NOXIOUS WEED SEEDS	TEST WEIGHT (POUNDS PER BUSHEL)	DISEASE
CORN		NOT OVER 1% OF CORN OF OTHER COLORS	90	99	NONE	NONE		TREAT IF DISEASED
WHEAT		NOT OVER 2% OF WHEAT OF OTHER CLASSES	90	98	0.5		57	BUNT FREE OR TREATED. FREE FROM NEMATODE GALLS 3/
OATS		NOT OVER 5% OF OTHER OAT TYPES	90	95	1.0		28	SMUT FREE OR TREATED
BARLEY		NOT OVER 3% OF BARLEY OF OTHER CLASSES	90	95	0.5		45	SMUT FREE OR TREATED (95% FREE OF SCAB)
RYE	AVOID NORTHERN-GROWN VARIETIES FOR USE IN THE SOUTH		90	95	0.5		52	NOT OVER TRACE OF ERGOT. FREE FROM NEMATODE GALLS. 3/
RICE		NOT OVER 1% OF OTHER TYPES, NOR OVER 0.1% OF RED RICE	90	97	0.1		45	
BUCKWHEAT			90	97	0.1		45	
FLAXSEED		NOT OVER 5% OF OTHER VARIETIES FOR SEED FLAX AND NOT OVER 1% OF OTHER VARIETIES FOR FIBER FLAX	90	95	1.0 (NOT OVER 0.1% MUSTARD)		50	SEED TREATMENT IS RECOMMENDED IF SEED IS SCABBY OR WEATHER DAMAGED
SORGHUM	SHALL CONFORM WITH THE RECOMMENDATIONS OF THE LOCAL STATE EXPERIMENT STATIONS	NOT OVER 1% OF OTHER VARIETIES	90	98	NONE	NONE	(SWEET 1/8) (GRAIN 5/8)	TREAT WITH COPPER CARBONATE

1/ GOOD SOUND UNDAMAGED GRAIN SHOULD GERMINATE 95 PER CENT.

2/ IMPURITIES INCLUDE OTHER GRAINS AND SEEDS, BROKEN SEEDS, CHAFF, OTHER INERT MATTER, AND WEED SEEDS.

3/ NEMATODE GALLS ARE LIKELY TO OCCUR IN WHEAT AND RYE FROM MARYLAND, VIRGINIA, WEST VIRGINIA, NORTH CAROLINA, SOUTH CAROLINA, AND GEORGIA.

GERMINATION AND PURITY OF CERTAIN FORAGE CROP SEEDS

Legumes	Germination Per Cent	Purity Per Cent	Grasses	Germination Per Cent	Purity Per Cent
Alfalfa	85	98	Blue grama grass	40	50
Alsike clover	85	97	Bermuda grass	70	95
Austrian winter peas	90	99	Canada bluegrass	75	81
Cowpeas	80	99	Carpet grass	75	67
Crimson clover	90	97	Crested wheatgrass	75	85
Crotalaria	80	99	Dallis grass	30	80
Lespedeza	88	96	Kentucky bluegrass	75	89
Red clover	85	98	Meadow fescue	80	94
Soybeans	85	99	Millet (common foxtail)	85	95
Sweet clover	85	98	Orchard grass	75	88
White clover	85	96	Redtop	90	92
Velvet beans	88	99	Reed canary grass	70	98
Vetch	85	95	Ryegrass	85	99
			Sideoats grama	40	50
			Smooth brome grass	75	85
			Sudan grass	75	96
			Timothy	84	98
			Western wheatgrass	70	80

The variety to be grown shall conform with the recommendations of the local state experiment stations.

The seed must meet all the requirements of the seed laws of the state. It should not contain either singly or collectively (1) more than one noxious weed seed in five grams of the grasses and legumes not otherwise classified; and (2) not more than one noxious weed seed in 100 grams of vetches, Austrian winter peas, soybeans, cowpeas or seed of similar size. In no case should the seed contain more than 2 per cent of any and all weed seeds.

Suggestions as to Cotton Planting Seed

1. Where clients are located in one-variety communities they should, of course, become members of the community organization and secure seed in the regular way through this organization.
2. Where projects comprise a group of farmers who have their own gin, they should standardize on one variety and function as a one-variety community securing foundation seed from a reliable source and increasing planting seed for the members in the usual way.
3. Farmers who are not in communities organized for standardized production should consult their farm supervisor or county agent or write to the state extension agronomist or cotton specialist for (a) advice as to the variety they should plant, (b) reliable sources of seed and (c) place and procedure for having germination tests made of their planting seed.

Cautions

1. In the coastal plain section of the Southeast and Mid-South and in some of the lighter soils in other areas, special consideration should be given to cotton wilt. Where the farm is known to be infected with wilt only the best wilt resistant varieties should be planted. The county agent or the cotton specialist at the state college will know the best varieties.
2. Planting seed should germinate above 80 per cent. If the seed comes from a reliable source and the germination percentage is known and due allowance made as to price and rate of planting, seed with germination as low as 60 per cent might be planted with safety provided the seed is treated with ceresan or some equally effective dust fungicide.
3. Treating planting seed with ceresan or some equally effective dust fungicide reduces losses to stand by preventing or reducing injuries frequently caused by seedling diseases.

Suggestions Relative to Desirable Varieties and Grades of Tobacco Seed

1. There are few, if any, exceptions to the general rule that only standard local varieties of seed should be used in growing the various commercial types of tobacco. It is well to avoid even the use of new strains of the standard varieties until such strains have been adequately tested with respect to yielding power and, especially, as to the quality of leaf produced. Ordinarily

a large number of strains differing somewhat among themselves in relatively minor characteristics are used in the production of any particular type of tobacco, but as a rule a very few of these are recognized as being somewhat superior, all requirements considered.

2. In those areas for which certified seed of accepted standard varieties are available, these are recommended as a satisfactory means of insuring that seed to be used in growing are true to type. In other cases, it is suggested that growers desiring to purchase authentic seed consult their county agent, extension specialists, or state experiment station authorities as to dependable sources of supply. However, there is no particular reason why the average grower should not produce his own seed supply if he is growing a desirable variety.

3. Tobacco seed should be well cleaned, but in general, if this is done, sterilization of the seed is seldom necessary, except possibly in areas where wildfire or blackfire is prevalent. Only seed of known viability should be planted. While it is not difficult to test the germination of tobacco seed, most growers, perhaps, will need to depend on extension agencies for such tests, as well as for adequate cleaning of the seed. Good, well-cleaned seed commonly show a germination of 80 per cent or better, though seed produced in some years show poor germination even when fresh. Properly stored, tobacco seed will retain their viability for 5 to 10 years.

DESIRABLE QUALITIES OF VEGETABLE SEEDS FOR HOME GARDENS

KIND OF VEGETABLE	GERMINATION VALUE THAT SHOULD BE RE- QUESTED (1)	MINIMUM GER- MINATION VALUE ACCEPTED (2)	DISEASE RESISTANT VARIETIES AVAIL- ABLE FOR REGIONS NEEDING THEM	DISEASE FREE SEED SHOULD BE REQUESTED	SEED TREATMENT DESIR- ABLE. FOLLOW RECOM- MENDATIONS OF STATE SPECIALISTS
BEAN					
LARGE SEEDED LIMA	80	70			
SMALL LIMA	85	80			
SNAP	90	80	MOSAIC AND RUST RESISTANT	BACTERIAL BLIGHT AND ANTHRACNOSE	
BEET	85	65			
BROCCOLI	85	75			
CABBAGE	85	75	YELLOWS RESISTANT	AS CABBAGE BLACKLEG AND BLACK ROT	YES YES
CARROT	80	55			
CAULIFLOWER	85	75		AS CABBAGE	YES
CELERY	75	60			
SWISS CHARD	85	65			
COLLARD	85	75		AS CABBAGE	YES
CORN - SWEET	90	75	HYBRIDS	STEWARTS DIS- EASE AND ROOT ROT	YES
CUCUMBER	90	80			YES
EGGPLANT	75	60			
KALE	90	75		AS CABBAGE	YES
KOHL-RABI	85	75			
LETTUCE	90	80			
MUSKMELON	90	80	MILDEW RESISTANT		YES
MUSTARD	85	75			
OKRA	75	50			
ONION (SEED)	90	70			
PARSNIP	75	60			
PEA - GARDEN	90	80	WILT RESISTANT		
PEPPER	75	60			
PUMPKIN	90	75			
RADISH	90	80			
RUTABAGA	90	75			
SALSIFY	85	75			
SPINACH	85	60	BLIGHT RESISTANT		YES
SQUASH	90	75			
TOMATO	90	80			
TURNIP	90	80			
WATERMELON	85	70	WILT RESISTANT		

(1 AND 2) THE HIGHER GERMINATION VALUE REPRESENTS THE QUALITY THAT MAY REASONABLY BE EXPECTED IN PURCHASING SEEDS. HOWEVER, FOR SPECIFIC VARIETIES FOR SOME YEARS THIS QUALITY MAY NOT BE AVAILABLE. IN GENERAL, SEED OF LOWER GERMINATION THAN THE MINIMUM VALUE GIVEN SHOULD NOT BE ACCEPTED. THESE MINIMUM VALUES ARE THE VEGETABLE SEED STANDARDS OF THE VIRGINIA STATE DEPARTMENT OF AGRICULTURE.

POTATOES - IRISH COBBLER AND BLISS TRIUMPH ARE MOST UNIVERSALLY PLANTED AS EARLY VARIETIES. STATE WORKERS SHOULD BE CONSULTED RELATIVE TO LATE OR MAIN-CROP VARIETIES. CERTIFIED SEED SHOULD BE USED WHEREVER PRACTICABLE. SEED TREATMENT FOR SCAB AND OTHER SURFACE BORNE DISEASES IS RECOMMENDED FOR SECTIONS WHERE THESE DISEASES OCCUR.

SWEETPOTATOES - STATE WORKERS SHOULD BE CONSULTED REGARDING VARIETIES. SEED TREATMENT RECOMMENDED BEFORE BEDDING. PLANTS SHOULD BE GROWN IN HEATED BEDS IN MOST SECTIONS. INSTRUCTIONS TO BE GIVEN GROWERS RELATIVE TO CURING AND STORING SWEETS.

ONION SETS - SETS TO BE SOUND AND DRY, PLUMP AND HEAVY, FREE FROM SPROUTS AND BRIGHT IN COLOR. SETS ARE CLASSED AS "YELLOW", "WHITE", AND "RED". MULTIPLIER ONIONS RECOMMENDED FOR FALL PLANTING.

ALL MATTERS PERTAINING TO THE SELECTION OF VARIETIES OF VEGETABLES TO BE DECIDED BY STATE WORKERS WITH LIBERAL PROVISION FOR SUBSTITUTION.

LIST OF SEED HOUSES

The following names of seed companies are merely suggested as among those that might be in best position to furnish special collections of seeds for use of Farm Security Administration families. All things being equal the orders should be placed with the local seed houses, but it has been our experience that certain of the larger seed companies such as the W. Atlee Burpee Seed Company and the Ferry-Morse Seed Company have the equipment and are in best position to give extremely low prices on collections of garden seeds.

W. Atlee Burpee Seed Company	Philadelphia, Pa.
Ferry-Morse Seed Company	Detroit, Michigan San Francisco, Calif.
Vaughan's Seed Store	Chicago, Illinois
The Templin-Bradley Company	Cleveland, Ohio
Joseph Harris Company, Inc.	Cold Water, N. Y.
David Landreth Seed Company	Bristol, Pa.
The Livingston Seed Company	Columbus, Ohio
H. G. Hastings Seed Company	Atlanta, Georgia
Aggeler and Musser Seed Company	Los Angeles, Calif.
T. W. Wood & Sons	Richmond, Virginia

(While it is impracticable to provide a complete list of dealers, this partial list is furnished for your information, with the understanding that no discrimination is intended and no guarantee of reliability implied.)

(NAME OF CLUB OR ASSOCIATION)

(Place and date)

Gentlemen:

The (Name of Club or Association) is in the market for _____ sets or collections of garden seeds, each collection to be packeted, assembled and wrapped in a package or strong envelope in which they can be delivered to the individual gardeners. Price should include delivery prepaid to (Name of Club or Association) at (Place of Delivery).

Each collection should include the following seeds in the quantities indicated. Germination, disease resistance, and seed treatment should conform to the requirements as given on the enclosed sheet (a sheet is to be prepared at the time request is submitted). The germination and varietal purity of the seeds will be checked by qualified seed specialists.

(LIST OF SEEDS AND QUANTITIES):

We will appreciate receiving your bid not later than (Date) as we will desire seeds delivered by (Date).

Very truly yours,

(Signature of Club or Association Officer)

Note - (Before using this letter, arrangements should be made to have a qualified state agency take care of the testing. The attached sheet of garden seed standards is not intended to be a part of the above letter. Your own state standards, if any, should be attached.)

